

**Notice of Allowability**

Application No.

10/801,732

Applicant(s)

SOBOL, ROBERT E.

Examiner

Art Unit

DANIEL G. MARIAM

2625

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to a preliminary amendment filed on 3/15/2004 & a telephone interv. dated 12/22/05.
2. ☒ The allowed claim(s) is/are 1,2,5-10 and 13-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 12/22/2005.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**DANIEL MIRIAM**  
**PRIMARY EXAMINER**

## **EXAMINER'S AMENDMENT AND REASONS FOR ALLOWANCE**

### **Examiner's Amendment**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Leslie P. Gehman (Reg. No. 45,624) on December 22, 2005.

The application has been amended as follows:

Amend claim 1 as follows:

At line 8, delete the limitation "ration" and replace it with "ratio" - -

Amend the specification as follows:

In page 1, above the heading "FIELD OF THE INVENTION" insert - -

### **"CROSS REFERENCE TO RELATED APPLICATIONS**

This application is a divisional application of US Patent Application Serial No. 09/491,946 filed on January 26, 2000 (which is now US Patent No. issued on July 6, 2004)." - -

### **Reasons for Allowance**

2. Claims 1-2, 5-10, and 13-16. The claims will be renumbered as 1-12.
3. The following is an examiner's statement of reasons for allowance: the instant invention discloses a method of local contrast mapping that changes the dynamic range of an original image to more closely match the dynamic range of the medium used for the reproduction. The

method compresses large contrast differences between different areas of an image while preserving small contrast differences between different areas of an image. The key difference between the instant claimed invention and the closest prior art (Fuss, et al “hereinafter Fuss”) is the fact that Fuss does not rely upon limiting the maximum contrast differences between different areas of the original image, and where the maximum contrast difference in the original image is limited to a ratio of greater than 4-to- 1. Upon acquisition of the original image, the instant claimed invention changes the dynamic range of the original image to more closely match the dynamic range of the medium used for the reproduction by preserving small contrast differences between different areas of the original image while limiting the maximum contrast differences between different areas of the original image, and where the maximum contrast difference in the original image is limited to a ratio of greater than 4-to- 1. These features in combination with all of the other elements of the claims are not disclosed or fairly suggested by the closest prior art of Fuss.

### **Conclusion**


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent numbers: 4384336, 4649568, 5012333, 5231487, 5363209, 5450502, 5581370, 5719677, 5802214, 5835618, 6101273, and 6108457; and publications to: Rahman, et al. “Multi-scale Retinex for color image enhancement”, IEEE, pp. 1003-1006, 1996, Chen, et al. “Adaptive sensitivity CCD image sensor”, IEEE, pp. 1-4, 1995., and Larson, et al. “A Visibility matching tone reproduction operator for high dynamic range scenes”, IEEE, pp. 291-306, 1997.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL G. MARIAM whose telephone number is 571-272-7394. The examiner can normally be reached on M-F (7:00-4:30) FIRST FRIDAY OFF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, BHAVESH M. MEHTA can be reached on 571-272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
DANIEL G MARIAM  
Primary Examiner  
Art Unit 2625

December 22, 2005